



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/586,129

07/17/2006

Takayasu Ohara

MAT-8869US

1818

52473

7590

12/08/2010

RATNERPRESTIA

P.O. BOX 980

VALLEY FORGE, PA 19482

EXAMINER

DANG, KET D

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

12/08/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/586,129 | <b>Applicant(s)</b><br>OHARA ET AL. |  |
|                              | <b>Examiner</b><br>KET D. DANG       | <b>Art Unit</b><br>3742             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

1. This office action is responsive to the amendment filed on September 24, 2010. As directed by the amendment: claims 1 and 9 have been amended, claim 3 has been cancelled and no new claims have been added. Thus, claims 1-2 and 4-14 are presently pending in this application.

### ***Response to Amendments/Arguments***

2. Applicant's amendments/arguments with respect to claims 1-2 and 4-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Specification***

#### **Content of Specification**

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of

Art Unit: 3742

electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention

Art Unit: 3742

described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The title of the invention is objected to because it is not descriptive. It is suggested as "Floor-mounted and Ceiling-mounted Industrial Robot". Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 4-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haniya et al. (US Pub. No. 20040261562 A1) in view of Meyerhoff et al. (US Pub. No. 20050166699 A1).

Regarding claims 1, 9, and 11, Haniya et al. disclose an industrial robot (abstract) capable of being used in a floor-mounted state (see figure 1), comprising: a base 1 (fig. 1) for installation; a first arm 2 (fig. 1, corresponds to 1<sup>st</sup> arm 12 of the instant invention) rotatably attached to the base; a second arm 4 (fig. 1, corresponds to 4<sup>th</sup> arm 14 of the instant invention) being pivotable with respect to the first arm 2 (fig. 1); a third arm 5 (fig. 1, corresponds to 3<sup>rd</sup> arm 15 of the instant invention) pivotably attached to the second arm; a wire feeder 11 (fig. 1) provided to the second arm and being rotatable around a rotation axis (see R-axis rotation in figure 1); a welding torch 9 (fig. 1); and a torch cable 12 (fig. 1) for feeding a welding wire to the welding torch, the torch cable coupled to the wire feeder (page 2, paragraph 0035); a fourth arm 3 (fig. 1, corresponds to 4<sup>th</sup> arm 13 of the instant invention) attached to one side face of the first arm 2 (fig. 1) and one side face of the second arm 4 (fig. 1), the fourth arm 3 (fig. 1) pivotable with respect to the first arm 2 (fig. 1) and the second arm 4 (fig. 1); and a

Art Unit: 3742

feeder cable 12 (fig. 2) electrically coupling between an inside of the industrial robot and the wire feeder (see figure 1, para. 0033-0035).

With respect to claims 4 and 12, Haniya et al. discloses a rotation fixing part for fixing a rotation angle of the wire feeder 11 (fig. 1) (para. 0013).

With respect to claims 5 and 13, Haniya et al. discloses a position to which the wire feeder 11 (fig. 2) is attached is offset to a position apart from the third arm 5 (fig. 1).

With respect to claims 6 and 14, Haniya et al. discloses wherein at least a part of the wire feeder 11 (fig. 1) is located on the second arm 4 (fig. 1) (2<sup>nd</sup> arm is the same as upper arm).

With respect to claim 7, Haniya et al. discloses a fourth arm 3 (fig. 1) pivotably attached to the first arm and the second arm 4 (fig. 1).

With respect to claim 8, Haniya et al. discloses wherein the fourth arm 3 (fig. 1) is attached to one side face of the first arm 2 (fig. 1) and one side face of the second arm 4 (fig. 1).

Haniya et al. discloses all of the limitations of the claimed invention, except for a ceiling-mounted state; and a rotating hollow pipe shaft located coaxially; a fixing device including the rotation axis and provided to the second arm.

However, a ceiling-mounted state; and a rotating hollow pipe shaft located coaxially are known in the art. Meyerhoff et al., for example, teaches a ceiling-mounted state (para. 0020); and a rotating hollow pipe shaft 14 (fig. 7) located coaxially (para. 0054-0055).

With respect to claims 2 and 10, Meyerhoff et al. teaches a fixing device (see figure 1, not shown, similar to reference number 18) including the rotation axis and provided to the second arm 15 (fig. 1).

Meyerhoff et al. further teaches such a configuration provides moving paths of the robot can be shortened and when the operating positions of the robot are located in a limited space, operating positions of the robot can be effectively arranged without any limitation (para. 0010). It would have been obvious to one of ordinary skill in the art to modify Haniya et al. with a ceiling-mounted state; and a rotating hollow pipe shaft located coaxially of Meyerhoff et al. in order to provide moving paths of the robot can be shortened and when the operating positions of the robot are located in a limited space, operating positions of the robot can be effectively arranged without any limitation. Furthermore, as it is shown in figure 7, the wiring 36 (fig. 7) goes through the rotatable hollow shafts 12/14 (fig. 7) in order to prevent the tangling wire (para. 0053-0055). Therefore, the combination of Haniya et al. and Meyerhoff et al. fully meet all of claimed invention.



***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nihei et al. (JP 07108485 A) discloses rotary joint of robot and the like.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KET D. DANG whose telephone number is (571) 270-7827. The examiner can normally be reached on Monday - Friday, 7:30 - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Tu can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KET D DANG/  
Examiner, Art Unit 3742  
November 30, 2010

/Stephen J Ralis/  
Primary Examiner, Art Unit 3742